

Applicant: Yu-Lien Huang, et al.  
Serial No.: 10/656,586  
Attorney Docket No.: 67,200-1133

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**IN THE SPECIFICATION**

Please amend the second paragraph beginning on page 14 of the specification as follows.

Referring to FIGS. 2 and 3, a typical CVD system 34 in implementation of one embodiment of the present invention includes a process chamber 36 having a chamber wall 38 and a chamber bottom 40 which together define a chamber interior 42. A gas mix plate 48 is typically provided in the upper end of the process chamber 36 for receiving and mixing a flow of deposition gases 62. A showerhead 44 is mounted beneath the gas mix plate 48 in a manner to be hereinafter described and receives the gas 62 from the gas mix plate 48 and disperses the gas 62 into the chamber interior 42, typically through an underlying confine confinement ring 46, in conventional fashion. In operation of the CVD system 34, a wafer 50 is placed on a wafer support (not shown) provided in the chamber interior 42 for the deposition of material layers on the wafer 50, as is well-known by those skilled in the art. It is understood that the process chamber 36 heretofore described with respect to FIG. 2 represents one example of a process chamber which is suitable for the present invention and that process chambers of various description which may have features that depart from those heretofore described

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are equally suitable for implementation of the invention.

Please amend the first full paragraph on page 17 of the specification as follows.

Referring next to FIGS. 4-6, a typical CVD system 64 in implementation of another embodiment of the present invention includes a process chamber 66 having a chamber wall 68 and a chamber bottom 70 which define a chamber interior 72. A gas mix plate 78 is typically mounted in the upper end of the process chamber 66, and a showerhead 74 is mounted in the process chamber 66 in a manner to be hereinafter described. A spacer 86 is typically interposed between the gas mix plate 78 and the showerhead 74. A ~~confine~~ confinement ring 76 is typically mounted in the chamber interior 72, beneath the showerhead 74. In operation of the CVD system 64, a wafer 80 is placed on a wafer support (not shown) provided in the chamber interior 72 for the deposition of material layers on the wafer 80. It is understood that process chambers of various description which may have features that depart from those heretofore described with respect to FIG. 4 are equally suitable for implementation of the invention.

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Please amend the first full paragraph on page 18 of the specification as follows.

According to the present invention, the showerhead 74 is mounted in the process chamber 66 using multiple embedded fasteners 92. Each of the embedded fasteners 92 typically includes a fastener head 94 from which extends a threaded shank 96. As shown in FIG. 4, the showerhead 74 is mounted in the process chamber 66 by extending the threaded shank 96 of each embedded fastener 92 through a corresponding ring fastener opening 77 which extends through the ~~confine~~ confinement ring 76, a showerhead fastener opening 82 which extends through the showerhead 74, a spacer fastener opening 88 which extends through the spacer 86 provided between the gas mix plate 78 and the showerhead 74. The threaded shank 96 of each embedded fastener 92 is then threaded into a registering plate fastener opening 90 which extends into the bottom surface of the gas mix plate 78. As shown in FIG. 6, the bottom end of the ring fastener opening 77 is typically characterized by a circumferential expansion which defines a fastener head cavity 84 in the ~~confine~~ confinement ring 76. Accordingly, as shown in

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FIG. 4, the fastener head 94 of each embedded fastener 92 is contained in the corresponding fastener head cavity 84 in such a manner that the flat surface of the fastener head 94 is substantially flush with the bottom surface of the confine confinement ring 76.

Please amend the first full paragraph on page 19 of the specification as follows.

As shown in FIG. 5, multiple embedded fasteners 92 are typically used to mount the showerhead 74 in the process chamber 66. The embedded fasteners 66 may be equally spaced from each other along the circumference or perimeter of the ~~confine~~ confinement ring 76 and the showerhead 74. In a preferred embodiment, eight of the embedded fasteners 92 are used to mount the showerhead 74 in the process chamber 66, as shown, although a lesser or greater number of the embedded fasteners 92 may be used, as desired.

Please amend the first full paragraph on page 20 of the specification as follows.

It will be appreciated from a consideration of FIG. 4 that the fastener head 94 of each of the embedded fasteners 92 is

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recessed into the ~~confine~~ confinement ring 76 in such a manner that the threaded shank 96 each of the embedded fasteners 92 is substantially isolated from the chamber interior 72 in which processing of the wafer 80 is carried out. Accordingly, particles generated by friction between the showerhead 74 and/or the ~~confine~~ confinement ring 76 and the threaded shank 96, induced by thermal expansion and contraction cycling of the showerhead 74 and ~~confine~~ confinement ring 76 during processing, are incapable of inadvertently falling into the chamber interior 72 and contaminating a wafer 80 being processed therein.